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ABSTRACT

This booklet for parents of children with attention deficit hyperactivity disorder (ADHD) provides information on the disorder. Sections address the symptoms and causes of ADHD, social problems of children with ADHD, factors relative to children and adolescents with ADHD at school, home interventions for ADHD, drug therapy, and future treatment options. Parents are urged: (1) to set up clear and concise rules of behavior for the family, including the child with ADHD; (2) to give instructions as simply and clearly as possible to the child with ADHD; (3) to try to keep the child's stimulation level as low as possible; (4) to allow the child choices within the limits that have been set; (5) to help the child find avenues of self-expression that will help him express his wants in an acceptable, useful manner; (6) to use a timer with small chores in order to help give a child a sense of passing time; (7) to be positive; (8) to be aware of what is being reinforced; (9) to be aware of the difference between incompetent vs. non-compliant behaviors; and (10) to participate in a parenting class. A list of informational resources for parents is included. (Contains 21 resources.) (CR)

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PARENT'S GUIDE

ATTENTION-DEFICIT HYPERACTIVITY DISORDER IN CHILDREN

FOURTH EDITION

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At four years of age, Tim has been a difficult and frustrating child for his parents. As an infant, Tim was often irritable, overactive and moody. He had trouble fitting routines and his irritable, high-pitched crying resulted in his parents frequently curtailing their family outings. At five years of age, he continues to be overactive and temperamental. He rarely sits still and provides his parents with very little pleasure. He acts impulsively and appears to engage in a high degree of risk-taking behavior. This has resulted in numerous bumps, bruises and half a dozen trips to the hospital emergency room. With his siblings and peers, Tim is extremely aggressive and his parents have been asked to remove him from two preschool settings. He continues to frustrate easily and has tantrums on a daily basis. Tim's parents are at their wits end. They are angry, frustrated and unhappy. They have also begun to anticipate that Tim may experience significant problems with learning and behavior as he enters kindergarten. Despite all of his difficulties, Tim, too, is well aware of his parent's unhappiness. Tim is a child experiencing a severe Attention-deficit Hyperactivity Disorder.

ATTENTION-DEFICIT HYPERACTIVITY DISORDER

Attention-Deficit Hyperactivity Disorder (ADHD) is comprised of a group of behaviors which affect children in all areas of their interaction with the world. Children with ADHD commonly present multiple and varied problems as the result of a core difficulty with impulsivity, leading to difficulty in the three other skill areas:

1. **Impulsivity.** Children with ADHD know what to do but don't routinely do what they know. These children have difficulty thinking before they act. They struggle to weigh the consequences of their actions and plan future actions. They may know a rule but are unable to use the rule to govern their behavior. This results in a significant degree of inconsistent as opposed to non-compliant behavior. Literally, problems occur accidentally.

2. **Inattention and distractibility.** Problems attending to repetitive, effortful, uninteresting activities are primarily the result of impulsivity. A small group of children with ADHD who do not suffer from impulsivity actually experience a core deficit with attention span. They have difficulty screening out distractions. They may also be distracted by inner thoughts. The majority of children with ADHD, as the result of their impulsiveness, struggle to select what is important to pay attention to. They have difficulty beginning activities, sustaining attention until the activity is completed successfully, focusing attention on two events simultaneously such as the teacher and taking notes, and being vigilant or ready to respond. They are capable of paying attention but appear to require greater motivation and interest to do so.

3. **Difficulty delaying rewards.** Children with ADHD experience difficulty working towards a long-term goal. They require immediate, frequent, predictable and meaningful rewards. Inconsistent payoffs result in most tasks being left unfinished. Due to their repeated failure and the fact that their incompetence frequently elicits negative reinforcement, children with ADHD often learn to work to avoid aversive or negative consequences rather than to earn positive consequences. They also appear to require many more successful trials before a new behavior can be self-directed.

4. **Overarousal.** Children with ADHD tend to be excessively emotional and active. Difficulty controlling bodily movements is noted in situations in which they are required to remain still for periods of time. They express the extremes of their emotions faster and with greater intensity than is age appropriate. They become frustrated quickly, often over minor events. Everyone around the child with ADHD is well aware of the child's presence and current feelings.

WHAT CAUSES ADHD?

Children have been compared to snowflakes. Although they are all made of the same materials, no two are exactly alike. Science has discovered that certain innate or inborn characteristics either help or hinder children as they develop. An irritable, restless, unhappy infant, for example, will in all likelihood have a very negative impact upon his parents. That impact then influences the manner in which those parents respond to the child. Parental and environmental response over time plays a major role in the child's developing personality. It is important to remember that children's personalities are not blank slates upon which we as parents and teachers write. Personality develops through a combination of the child's capacities and our response to those capacities. There is a very great difference in the type of relationship you as a parent will develop with your child if she is able to sit for periods of time resulting in a positive interaction. On the other hand, if your child is frantic and overactive, he may frequently cause problems at home and in the community resulting in less opportunity for you to interact in a positive way. In the long run, this will have a major impact on the child's personality.

Attentional skills, like other skills often run in the family. It is not surprising that children with ADHD are often described as taking after their father or other close relatives. It is common to find more than one sibling in a family affected. For this reason, hypotheses of inherited causes for ADHD are the most widely accepted. In all likelihood, heredity is the major identifiable causative factor for ADHD. The inheritance of ADHD, however, is not a simple matter. Boys appear to be affected more frequently than girls. It is estimated that ADHD appears to affect two to five percent of all children. In lower socioeconomic areas, there appears to be a higher incidence of ADHD as well as other developmental problems. Yet, some parents who themselves have had ADHD have children who exhibit none of the symptoms.

There are a number of other possible causative explanations for inattention. For example, attentional

skills are decreased in children with physical illness. Ear infections, allergies, migraine headaches and thyroid dysfunction are just a few examples of physical illness which decrease a child's ability to pay attention. Any child with a fever, for example, would not be expected to have functional concentration and attentional skills. These problems are short-lived and can usually be differentiated from primary attention disorders.

Children with learning disabilities or psychological problems such as anxiety, conduct disorder, depression or fearfulness, may develop attention disordered behaviors. These behaviors, however, are symptoms of other problems. Some studies have suggested that as many as fifty percent of adolescents identified as ADHD can be shown to be suffering some degree of depression. Careful evaluation of children with ADHD and depression is needed to determine whether the depression is the cause of the attention deficit symptoms or the social and academic failure which results from the attention disorder has caused the depression.

Factors at home can also aggravate inattentiveness. Frequently, children with ADHD grow up and have children with similar difficulties. When parent's develop an impulsive, inattentive and distractible lifestyle it is all the more difficult for them to deal with children experiencing similar problems. Parental knowledge, skill and tolerance frequently determines whether normal childhood behavior is seen as problematic or problematic behavior is seen as appropriate. In some situations we see the combination of parent's difficulties contributing to the child's problems both by inheritance and by the methods chosen by the parents to deal with the child's impulsive, inattentive behavior.

Some children present with ADHD as the result of brain injury. Studies of children and adults have shown that inattentive, distractible, restless or impulsive behavior may be the product of an injury to any part of the brain. However, a history of direct brain injury is found in only a very small percentage of the ADHD population. In the past, ADHD behaviors were noted in children without apparent brain damage and the term "minimal brain damage" became popular. When it became clear that most of these children did not have even a minimal, definable brain injury, the syndrome was changed to "minimal brain dysfunction". Attention Deficit Disorder is a more descriptive term for these behaviors and has been used since 1980. In 1987, the American Psychiatric Association changed the diagnostic title of this disorder to Attention-deficit Hyperactivity Disorder.

Diet is a tangible part of daily living. Benjamin Feingold, M.D., a physician with an interest in allergy, proposed that artificial colors, preservatives and what are called natural salicylates aggravate or even cause

ADHD. He proposed eliminating these substances for remediation. His proposals were based primarily upon personal observations of patients under his care. He did not conduct formal, systematic investigation. Parents under the Feingold Diet are required to prepare most foods, including bread, from basic components at home. Most commercially prepared foods are off limits, including many fruits, drinks and readily available packaged or canned foods. Although many parents note a dramatic improvement in ADHD symptoms on the Feingold Diet and feel that time spent in food preparation pays great dividends, well controlled, scientific studies have not found the Feingold Diet to result in consistent improvements in children with ADHD. In tests in which parents and teachers were unaware of the presence or absence of these additives in the diet, ratings of the child's behavior often did not change when the supposed toxins were reintroduced into their diet. This would suggest that improvement in many of these children may be the result of an imagined or placebo effect.

Several studies have examined the presence of blood lead levels in ADHD children. Lead poisoning can lead to ADHD symptoms. In its extreme form, lead poisoning can also cause severe and irreversible neurological impairment.

Some studies have found a relationship between lead ingestion and ADHD symptoms. The correlation, however, is not strong enough to warrant diagnosis or treatment of an individual child for lead poisoning. This information has encouraged elimination of as much environmental lead as possible. It appears, at this time, that lead is an unlikely explanation for ADHD in the majority of children.

Refined sugar has come under scrutiny for possible aggravation of ADHD. Some have advocated refined sugar as the major "toxin" causing ADHD. Scientifically controlled studies have not demonstrated that refined sugar has a predictable effect on attention disordered behaviors.

While there may be many different causes for ADHD, we suspect that all of these causes appear to have a similar impact within the brain on the "attention system". Scientific studies suggest that attention is a complex process involving many parts of the brain. There are a number of theories concerning the operation of the attention system. This attention system appears to utilize neurotransmitters or brain chemicals which carry messages to all parts of the brain from the lower region or brain stem. Certain medications, especially the stimulant drugs, appear to effect these neurotransmitters, resulting in a more efficient functioning of the attention system. This system is then able to assist the child to attend, control bodily movements, reflect, and remain calm.

ADHD children are a puzzle for their parents. They create parenting problems which are unique to this disorder. Due to the ADHD child's impulsive, overaroused and inattentive behavior, he tends to create a constant state of disruption and confusion in the home. Parents with a number of other normally functioning and well-adjusted children are often perplexed by their inability to effectively parent their ADHD child.

ADHD children create a dilemma to effectively parent for a number of reasons. First, due to their inattention and distractibility, they may often miss critical parent directions and therefore not follow through. Many parents assume the child has attended and may not realize that their directions or recommendations have not been understood by the child.

Secondly, the ADHD child's almost continuous state of overarousal results in an excessive number of negative interactions with adults and teachers. The ADHD child is frequently negatively reinforced for inappropriate behavior. Parents often pay attention to the child when he is doing something which they do not like. Once he complies he receives less parental attention. For example, the child is sent off to get dressed but when checked on the child is not dressing. The parent is then the negative reinforcer. The child begins dressing because the parent insists but then the parent leaves to tend to other family affairs and the child stops dressing because the aversive or negative consequence, parental attention, has been removed. In this way ADHD children are victims of both their temperament which makes it difficult for them to remain on task and their learning history which is reinforcing them for starting but frequently not finishing tasks.

Many negative interactions are initiated when the child performs or exhibits a behavior which annoys or bothers the adult. The adult then responds with a negative or critical direction. ADHD children receive a significantly greater degree of negative feedback than other children. It is easy to see how this may lead to the child developing a view of the world in which he can never please

adults and in which he is continuously being told he is behaving inappropriately. It is also easy to see how this pattern may lead to the development of an actively or passively oppositional child. The child sees no reason to follow the adult's direction as his learning history has taught him that in the past he often does not succeed.

Third, and probably most important, the ADHD child's impulsive tendency to act without thinking and considering the consequences of his actions results in an inability to follow rules at home. ADHD children with significant impulsivity problems may not learn from their experiences. Corrected two or three times a normal child has the capacity to recall the intervention as well as the threat of future punishment, and inhibit misbehavior in all but the most inviting circumstances. A child with ADHD, however, becomes distracted by his own thoughts and desire for immediate reward. In these instances, the child acts impulsively. Although the child may have been punished numerous times for similar behavior and is able to clearly explain the rule, when the moment arises he acts impulsively and does not follow the rule.

It is our impression that at home the ADHD child's impulsivity and difficulty benefiting from experience is the foremost problem. Parents often become frustrated when their ADHD children do not follow through as they have promised or as they have been directed. Punishments are usually accelerated as parents assume the child has the capacity to follow the rule but is being oppositional and chooses not to. Unfortunately, the ADHD child may not possess the capacity to follow through despite frequent and increasingly punitive parental interventions. The atmosphere then of a child whom parents believe may purposefully be oppositional results in angry parents and frustrated, unhappy children. Many parents do not understand that the majority of the ADHD child's problems stem from incompetent behavior rather than from purposeful non-compliance.

In families with a number of children, the ADHD child is often scapegoated and picked upon by siblings. The ADHD child's impulsivity may result in sibling's possessions being taken or broken. The ADHD child's difficulty in following rule-governed behavior may result in embarrassment for siblings while interacting with peers. Finally, siblings may perceive that the ADHD child's behavior angers and frustrates parents which may cause them to further alienate their ADHD sibling.

Social problems for ADHD children often begin in the preschool years. The often frantic, overactive quality of their play results in an inability to stick to one activity for more than a few moments. This prevents the ADHD child from learning basic social rules during an extremely important and formative period. Clearly, it is the lack of the development of foundational social skills during this period that haunts the ADHD child as he grows and attempts to deal with his world. His lack of acquisition of basic social skills prevents the development of more complex skills during later years.

A significant percentage of preschool children experiencing the precursors of attention disorder, often present with speech and language problems. This factor further impairs the development of social skills. If the child's language skills are not as competent as his peers, it will be difficult for him to interact successfully with those peers. Secondly, just as the child may not use overt language, he may also not use covert or internal language to control and modify his behavior. Finally, impairment in language makes it difficult for the child to change from a tactile or feeling way of dealing with the world to a visual or seeing way. As children develop language skills, they no longer need to touch, taste or feel everything, but rather can store information about their world through vision. Children with delayed or impaired language often continue to feel and touch everything in their environment. The ADHD child with language problems is additionally at risk. Not only does he touch and feel everything, but he does so in an impulsive, energized manner. Recent studies have suggested that a significantly higher than expected group of ADHD children experience speech and language problems. The components of attention deficit combined with poor receptive and communication skills results in even further problems as the ADHD child attempts to meet the demands of his environment. Recent studies have also suggested that over time some language impaired children develop symptoms of attention deficit as the result of frustration. The possible

contribution of language disorder to the young ADHD child's behavior should be considered routinely as part of an evaluation.

ADHD children are often described by adults as lacking social skills and appropriate social judgment. They often spend less time in activities with others due to these deficiencies. They are also described as having fewer friends than most due to negative, bossy or annoying behaviors. They may tease, provoke, fight or interrupt others. They may strike back impulsively with angry behavior. At times they can be argumentative and need to have the last word in verbal exchanges. They can be physically aggressive towards objects or persons. They can say uncomplimentary or unpleasant things to children and adults.

Although ADHD children may be less well accepted by their peers and not sought out for play due to their social incompetence, and rejected due to their at times inappropriate or aggressive behavior, they usually desire social interaction. Parents and teachers will describe the ADHD child as wanting to interact but not knowing how to go about it. The repeated social failure frequently takes its toll on the ADHD child's self-confidence and future behavior. Nonetheless, the manner in which they interact is often quite inefficient resulting in the child's alienation from others. Their lack of social competence, combined with behavioral excesses such as aggression, results in multiple social problems. Characteristically they often are quite perplexed and puzzled as to why other children do not want to play or interact with them.

Given the fact that ADHD children exhibit a significant degree of behavior which results in negative attention from adults and children, many develop a view of the world as a most controlling, negative place. A place in which they are often doing things which others don't like. A place in which they are unable to behave correctly and are constantly being given negative feedback. It is not surprising, given this view of the world, that they may become oppositional and controlling.

It is also not surprising that they may often develop strong feelings of helplessness, unhappiness, social isolation, and a poor self-image. Development of these types of feelings, which are considered characteristic of depression, are easily understood given the fact that the ADHD child is often a failure in social relations.

Twenty years ago, parents of ADHD children were reassured that these were transitory problems and would be outgrown in adolescence. While some of the primary symptoms, such as hyperactivity, may diminish in intensity, many of the problems of ADHD persist and become increasingly complex in adolescence. A significantly higher than normal group of ADHD adolescents are involved in

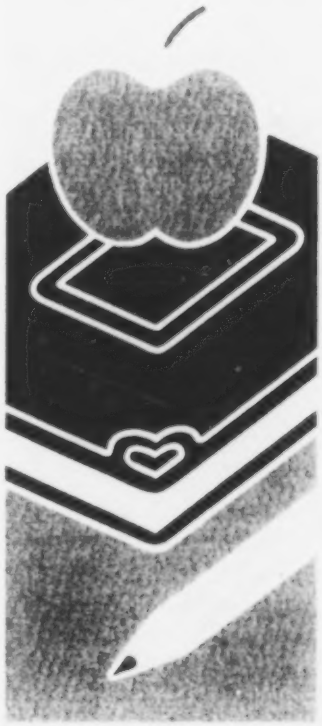
anti-social activity, delayed in academic achievement, and may be suspended from school for violation of rules. ADHD adolescents continue to have problems socially. They may exhibit signs of helplessness and depression. Although it may be the co-occurrence of adolescent ADHD and conduct problems which predicts adulthood anti-social behavior and substance disorders, a history of ADHD places any adolescent at greater risk to experience adulthood problems. ADHD adolescents are well aware of their long history of problems. When they were youngsters, teachers and family members attempted to work with ADHD problems. During these years, however, the ADHD adolescent is increasingly a victim of his own problems and may find himself rejected by family and friends. Unfortunately, many ADHD adolescents are unable to succeed academically, socially, or athletically. They often have difficulty finding some areas of success in their lives.

It is now well recognized that social problems for children with ADHD may result not so much from not knowing what to do but not doing things they know. Although basic social skills training in and of itself may not yield long term benefits for children with ADHD, such training often affords these children the opportunity for successful peer contact and positive experiences. It may sharpen their knowledge of socially appropriate behaviors, increase status with their peers and when well planned including parents and teacher may lead to real benefits. Social skills programs for children with ADHD are taught in a small group setting over the course of multiple weeks. Skills taught include those involved in maintaining conversations, joining others, recognizing and expressing feelings, playing cooperatively, solving problems and learning self-control. Increasingly the focus socially for children with ADHD is making certain that they possess appropriate basic social skills even if they do not always use them consistently or successfully.

THE ADHD CHILD AND ADOLESCENT IN THE CLASSROOM

As the ADHD child enters kindergarten, he or she must now learn to deal with the rules, structure and limits of organized education. The child can no longer count on parents to act as buffers. The ADHD child's temperament simply does not fit well within the expectations of school.

ADHD children appear to be a negative force in the classroom, frequently eliciting negative reinforcement from the teacher. The pattern is the same whether the child is hyperactive or not. Attention directing misbehavior, usually off-task behavior, elicits the teacher's attention. The teacher pays attention to the child until the child begins working again. This tends to focus on the off-task or inappropriate behavior rather than terminating the behavior. In this case, the teacher's direct attention towards the ADHD child acts as a negative reinforcer. The child begins working again, not to complete the task but to have the aversive consequence, the teacher, stop paying attention to him. Once the teacher moves off to the rest of the class, the ADHD child has been negatively reinforced, the reason for working is gone and the child stops working. ADHD students are both victims of their temperament, which does not enable them to remain on task, and of their learning history, which reinforces them for starting, but not completing tasks.



There are a number of other factors relative to the ADHD child and adolescent at school.

Intelligence. It has been argued that ADHD children are innately less intelligent than their non-ADHD peers. Careful research suggests that this is not the case but rather we are observing the impact of impulsive, inattentive behavior on test performance. As a group, ADHD children appear to be as intelligent as their non-ADHD peers. It has also been observed that the very bright ADHD child is frequently able to compensate for deficits throughout the elementary school years. Although he may be inattentive, disorganized and restless, the bright ADHD child is frequently capable of completing work with a minimal amount of effort and in a minimal amount of time. Frequently these children experience

greater difficulty in junior and senior high school, when the demands of school begin to overwhelm them.

Achievement. As a group, report cards of elementary school ADHD children characteristically look worse than their non-ADHD peers. Achievement testing, however, suggests the majority are learning adequately. They simply are not performing. Although there appears to be a greater incidence of specific learning disabilities among ADHD children, the majority appear to have intact learning skills. Over time, however, the cumulative effect of lack of attention and work completion takes its toll. A significant number of ADHD adolescents begin to lag behind their peers in at least one academic subject.

Daydreaming. ADHD children are frequently described as daydreaming. Studies suggest that they are not daydreaming as much as interested in something other than what the teacher is focusing on. ADHD children appear to engage in a significantly greater degree of non-productive behavior than their non-ADHD peers. Most elementary school age children find something productive to do during unstructured periods. Characteristically, ADHD children engage in non-productive activities, such as zipping and unzipping their coats or rearranging the clutter in their desks.

Uneven and Unpredictable. The ADHD child's uneven performance creates even more difficulty for him. He may successfully complete a task one day but seem unable to complete a similar task the next day. Teachers frequently reassure the ADHD child that they can do it "if they try" and "they did it yesterday so they should be able to do it today." This is somewhat analogous to telling a child he hit a home run the last time up at bat and, therefore, he should be able to hit a home run every time up at bat. Frequently, work completion for the ADHD child is equivalent to hitting a home run.

Classroom studies suggest that by third grade, most ADHD children are well aware of their achievement and behavioral difficulties. Sociometric studies usually reflect the ADHD child as being less popular and frequently excluded from social interaction. ADHD children are often described as immature and incompetent. Even their best efforts at socialization frequently fail. Although some ADHD children are capable of developing appropriate social skills, the majority appear to have difficulty. Some children simply lack basic social skills which results in low popularity and poor acceptance. Other children exhibit behavioral excesses, such as aggressive, controlling behavior which results in rejection and dislike.

In addition to behavior problems, the ADHD child's academic performance is often quite uneven. The quality and quantity of the child's

work may be most irregular. ADHD children may perform well some days and poorly others.

A number of other factors affect the ADHD child's classroom performance. Many function better on self-paced rather than teacher-paced tasks. ADHD children also have great difficulty learning the ground rules for a new activity. They are often unable to adapt to new situational demands. Changing activities is often a difficult task. It is easier for the ADHD child to change from a structured, organized activity to an unstructured or disorganized activity rather than the reverse. ADHD children also have difficulty effectively utilizing class time.

It has been suggested that four-fifths of adolescents experiencing ADHD are behind at least one year in at least one basic academic subject by high school age. The majority of these delays stem from the cumulative effect of poor attention and lack of work completion rather than from a specific learning disability. Teachers continue to complain of inattention, restlessness, overarousal, incomplete work, and poor motivation. Failure on the part of teachers to effectively deal with problems and motivate ADHD adolescents often results in suspension from school or permanent exclusion from the educational system.

Effective classrooms for children with ADHD should be organized and structured. This includes clear rules, a predictable schedule and separate desks. Rewards should be consistent and frequent. A response-cost reinforcement program must be an integral part of the classroom. Teacher feedback should be frequent and immediate. Minor disruptions are best ignored. Academic materials should be matched to the child's ability. Tasks should vary but generally be interesting. Transition times as well as recess and special assemblies should be closely supervised. Parents and teachers must also stay in close communication. Finally, expectations should be adjusted to meet the child's skill level academically and behaviorally.

WHAT CAN PARENTS DO?

An Attention-deficit Hyperactivity Disorder has a major impact on all areas of a child's development. Attention disordered children often experience problems with: social skills, school progress, problem-solving ability, and emotional adjustment. The most successful treatments for children with Attention-deficit Hyperactivity Disorder are long-term and involve assistance to the child, family and school in whatever capacity is necessary. A treatment program might include individual psychotherapy, parent education and training, medication, problem-solving and social skills training in a group setting, and school intervention.

Individual psychotherapy for ADHD is directed at assisting children in better understanding the manner in which they deal with their environment and the reasons for their difficulties. Children are assisted in developing an understanding of the impact their behavior has upon their peers, teachers and family members. Therapy then assists the child in developing more functional coping and interactional skills.

Problem solving skills training groups assist ADHD children in developing the ability to recognize and understand problems, review alternatives and make reasonable choices. Social skills training provides skill deficient ADHD children with the opportunity to learn and practice basic skills necessary in making and keeping friends.

Stimulant medications can be helpful in reducing restless, overactive and impulsive behavior while increasing attention and the ability to complete home and school tasks. Many ADHD children may not require medication as part of their treatment plan. The use of medication must be determined by the physician and parents after careful evaluation of the risks, benefits and alternatives of medication intervention, and a review of the child's functioning.

An Attention-deficit Hyperactivity Disorder is not a time-limited problem. There are as many adolescents experiencing attention and related problems as there are younger children experiencing such problems. For some, these problems may persist into adulthood.

WHAT CAN PARENTS DO?

If you suspect your child has an Attention-deficit Hyperactivity Disorder, it is important to seek professional assistance. Your pediatrician or family physician may be a good place to start to obtain a medical evaluation and to answer questions. School personnel, including teachers and school psychologists, as well as community resources, including **specialized centers,** or individual practitioners with special interest and expertise in this disorder are also good sources of information and guidance. As you seek guidance, it is important to work with individuals who have had experience with Attention-deficit Hyperactivity Disorder and can provide an in-depth evaluation. This will clearly define your child's behavioral weaknesses and the specific problems which may need remediation. Remember, this is not a short-term set of problems, but may require professional guidance and assistance for yourself and the child over the coming years. It is important for you to find someone to work with whom you trust and value.

Developing an effective system for parenting a child with ADHD is a four step process. First and foremost is **understanding.** It is essential that as a parent you are well educated concerning the varied and multiple problems which inattentive, impulsive and easily overaroused children experience daily in their environment. Remember that these are a set of behaviors and problems which are managed, not cured. Effective management requires adequate understanding. Read as much as you can about these problems. Attend lectures and join a support group for parents of ADHD children.

Second, it is essential that you develop the ability to differentiate between behavior which results from **incompetence** and behavior which results from purposeful **non-compliance.** Incompetence must be educated. Non-compliance needs to be punished. For example, if a child possessed the ability to behave in a certain manner but chose not to, punishment increases the likelihood that the child will carefully consider his actions in the future and behave in a more appropriate fashion. On the other hand if a child was unable to read, parents would not expect that punishing the child would in anyway improve this incompetent behavior. Education to improve reading would be the intervention of choice. Most parents will agree that the majority of problems ADHD children present in the home setting stem from non-purposeful, incompetent behavior rather than purposeful non-compliance. It is essential, therefore, that you are able to differentiate incompetence from non-compliance and develop sets of educational and punishing interventions to deal with both types of problems. Unfortunately, it is sometimes difficult to differentiate incompetent from non-compliant behavior. The third component in this

parenting model can assist in that process.

The third component requires you as a parent to be **positive** with your child. Tell your child what you want, not what you don't want. This is the essence of being positive. If your child is exhibiting a behavior which you do not like, instead of pointing out that behavior, simply tell the child what you want to see happen instead. The emphasis on what is to be done as opposed to what is to be stopped will help the child understand your needs. This will also set the stage for you to be better able to determine whether the child's behavior stems from incompetence or non-compliance. If you ask the child to comply and the response you receive is clearly negative, passive or oppositional, odds are the behavior stems from non-compliance and should be punished. On the other hand, if the child complies but a few moments later the problem arises again, there is a strong likelihood the problem results from incompetence. Remember, don't punish your child for factors beyond his control. If your five-year-old is unable to read, you would not punish him. Therefore, do not punish your child for impulsivity or inattention if you are aware that these factors are not the result of poor motivation nor opposition but rather actual skill deficit. Instead, restructure your expectations and provide educational interventions.

Finally, the fourth component requires you to **end interactions successfully.** It is important to understand that ADHD children frequently fail. They end up being punished or sent to their room without the opportunity to succeed. If you punish you must make certain that your child, following punishment, has the opportunity to try again, succeed and receive your praise.

Successful interactions with ADHD children focus on making tasks more interesting or increasing interest to complete tasks by providing valuable rewards. It is easier to modify the task or consequence than change the child.

It is critical for parents to understand that the best predictors of adult outcome for children with ADHD are the best predictors of outcome for all children. Thus, while treatment for ADHD is important, it is also important to recognize that children able to develop warm relationships with their parents, have parents who are available, consistent in parenting, and model appropriate attitudes and behaviors have better adult outcome. ADHD appears to be a catalyst. By itself it may predict school struggles and difficulty with social and home behavior. When mixed with other, more serious, childhood problems ADHD often leads to much more serious adult difficulties.

Set up specified time periods for waking, bedtime, chores, homework, playtime, T.V. time, dinner, etc. Changes in schedule are disturbing to ADHD children, so be as consistent as possible. Explain any changes in routine ahead of time so that the child understands and can anticipate changes.

Set up clear and concise rules of behavior for the family, including the ADHD child. Rules, as well as consequences for breaking them, and rewards for appropriate behavior can be written down and posted in a prominent place. Consistency is the key. If a rule is broken, consequences should follow every time. If the child behaves appropriately, reward him often! Be firm on setting limits, but give plenty of love and affection, too.

Give instructions as simply and clearly as possible, demonstrating if necessary. Ask your child to repeat them back to you, then praise him when he responds correctly. Do not give more than one or two instructions at a time. If a task is difficult, break it into smaller parts and teach each part separately.

Provide him with his own "special" quiet spot without distractions in which to do academic or quiet work. Remember that the child may have difficulty filtering out unnecessary stimulation.

Try to keep your child's stimulation level as low as possible. Have him play with one child at a time, involve him in one activity at a time, remove needless background noise such as radio and T.V. Put unused toys, games, etc., out of sight.

Repeated messages, directions, requests, etc., are inefficient disciplinary techniques and create a variety of unpleasant behaviors in the family. To stop this ineffective process, try the following: say what you need to say, but say it once–positively—briefly—clearly—completely—firmly—calmly. Follow through with a logical consequence or restructuring technique. ACT—DON'T YAK!!!

Allow the child choices within the limits you have set. Help him develop his initiative and self-control and give a sense of personal influence.

Help your child find avenues of self-expression that will help him

BEST COPY AVAILABLE

express his wants in an acceptable, useful manner. Children sometimes use misbehavior to communicate. Teach appropriate verbal communication skills. Ask yourself, "What does my child want to have happen as a result of this behavior?" and help him search for other ways to gain it.

Use a timer with small chores in order to help give your child a sense of passing time.

The ADHD child's behavior can often be very irritating. However, should you become angry your effectiveness with your child will be greatly reduced. Strive to keep your voice quiet and slow when managing your ADHD child.

Separate behavior which you may not like from the child's person which you like. (e.g., "I like you. I don't like you to run through the house.")

Be positive. Tell your child what you want, not what you don't want.

Be aware of what you are reinforing. Avoid being a negative reinforcer by paying attention to your child's appropriate behavior or completed tasks. Make certain your child understands what is expected and can do what is asked; then, when he does it, praise him.

Be aware of the difference between incompetent vs. non-compliant behavior. Remember that incompetence must be educated and non-compliance punished. If your child is purposefully oppositional time out is an effective punishment. If he forgets to flush the toilet because he is impulsive, then practicing toilet flushing is an appropriate educational intervention.

Participate in a parenting class. Many parent programs offer good ideas and effective interventions for all children including those experiencing ADHD. Remember, however, that within the context of any parent training program you must be aware of your child's limitations and the potential problems of the interventions suggested due to your child's impulsive, inattentive style.

Remember, it is important for you to be able to see the world through the eyes of your ADHD child. This will assist you in coping when the demands day in and day out become stressful.

A FEW WORDS ABOUT MEDICATION

In the 1930's, Dr. Charles Bradley prescribed stimulant medication for a group of children in an inpatient child psychiatry setting. To his surprise he discovered that rather than creating over-excitement and hyperactivity in this population, stimulants seemed to reduce restlessness and overarousal while increasing attention span. This was a dramatic response. When given a stimulant most ADHD children appear to slow down. We are now aware that this is not a paradoxical or opposite response to stimulants, which cause most adults to be more active. The stimulant acts in a very similar manner in the ADHD child's brain as in anyone else's. By stimulating the attention center we have previously described, the child is now able to control his attention and motor activity. He appears quieter and more attentive because he is in better control of himself.

The most commonly prescribed stimulant is methylphenidate. The brand name for this drug is Ritalin®. Of the children in the United States receiving stimulant medication, over ninety percent receive Ritalin®. Approximately one-third to one-half of ADHD children exhibit an immediate, positive and clearly observable response to the medication. The majority of the remainder exhibit some degree of response but approximately twenty percent exhibit no difference or primarily a negative response. Some children do not respond because they may have been inappropriately diagnosed and do not experience ADHD. For other children the attention system is less sensitive to medication than other systems and side effects such as sleeplessness or loss of appetite are present at lower doses than those needed to produce the desired positive effect on the attention system. Whatever the reason, some ADHD children will not respond well to stimulant medication.

Medication must be adjusted on an individual basis. Some studies have suggested that lower doses of Ritalin® (for example, a 5 to 10 milligram dose in a forty pound child) appear to work better for improving organization, attention span and work completion. Higher doses (for example, 10 to 20 milligrams in a similar child) appear better at reduc-

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ing restlessness and improving playground behavior. However, recent studies suggest that some increase in work and behavior continues to be observed as single dosage increases to 20 milligrams.

Dosage should be adjusted for each dose and time to maximize positive effects. Most children usually receive a dose between 10 to 15 mgs. in the morning. As Ritalin® usually loses most of its effect in four to six hours, a second, and sometimes third dosage is often needed. The amount of medication required for the second dose may be less than that needed for the initial dose. To find the best dosage of medication individual adjustment of each dose is recommended. Sustained Release Ritalin® was created to replace the need for a second dose. Unfortunately, it usually does not work as well as regular Ritalin®. Generic methylphenidate may be as effective as Ritalin® brand. Dosages over 60 mgs. total in a twenty-four period are not recommended.

If a child does not respond to Ritalin®, a number of other stimulant medications may be tried. There is a lower probability that a Ritalin® nonresponder will respond to one of the other stimulants. These include Dexidrine® (dextroamphetamine), Cylert® (pemoline) and Desoxyn® (methamphetamine). Some of these medications, however, have demonstrated a higher incidence of side effects, lower effectiveness and greater difficulty in titration. If a child does not respond to a stimulant, is seriously depressed, anxious or unable to take stimulant medications, the antidepressant, Imipramine®, may be helpful. The anti-psychotics such as Mellaril® or Haldol® can help the hyperactivity but will usually produce sedation or other side effects and are often used only in extreme situations. Although single case studies have suggested that anti-convulsants such as Dilantin® and Tegretol® have proven effective for ADHD children, some scientific research has suggested Dilantin® may worsen ADHD in some children. In experimental studies clonidine has proven effective for some ADHD children. It is now being prescribed primarily for children experiencing a combination of ADHD and the motor disturbances of Gilles de la Tourette Syndrome.

The most common side effect of stimulant medications is loss of appetite. This is not surprising since these medications were initially used to facilitate weight loss. The second most frequent side effect observed is that of "rebound irritability". As the stimulant medication wears off the child appears as a spring bouncing back, presenting a pattern of irritable, overaroused and restless behavior. In the past it was thought that stimulants were responsible for significant height and weight suppression in children. Current research suggests mild short-term weight suppression in some children with no proven suppression of height. Long-

term studies of adults who received stimulant medications as children suggest that as a group they are in the normal range for height and weight. Nonetheless, each child is followed individually. Studies have not shown that drug holidays during the school year, weekends, and over the summer are helpful at decreasing side effects. Stimulant medications are not recommended for most children under six years of age as there are frequently more side effects, including irritability and anxiety. In severe cases carefully monitored stimulant medications have been used effectively with children three to six years old. In these children behavioral interventions should always be exhausted before stimulant medications are considered.

Approximately one percent of children given stimulant medications develop repetitive, non-purposeful movements called tics. In most children the tics stop when the medication is discontinued. In rare cases children progress to having multiple tics involving the voice and different parts of the body (Gilles de la Tourette Syndrome). Current medical opinion suggests that use of stimulant medications doesn't cause Gilles de la Tourette Syndrome but the medication should ordinarily not be used in children with tics and should be discontinued if tics appear.

Your role is invaluable in assisting the physician in determining an appropriate level of medication within the home setting. Often ADHD children will be tried on a number of different dosages of medication.

Your feedback to the physician will assist in determining when the child demonstrates a positive response and, if so, which dosage appears to be optimum. It is most important to remember that pills will not substitute for skills. Keep in mind that medication may assist the ADHD child to complete work, pay attention, follow directions, and be more organized while reducing restlessness and overarousal. Medications will not cure learning problems, resolve a social skill deficit nor eliminate an emotional disturbance. If parents foster unrealistic expectations as to what medications may do, they run the risk of entering an increasing spiral of attempting to treat non-medication problems with medication and believing that more medication is needed to solve the child's problems.

WHAT THE FUTURE HOLDS

The most current treatment programs for children with ADHD include education for children, their families and teachers, the judicious use of medication, a careful application of behavior management strategies and, when appropriate, cognitive interventions focusing primarily on maintaining self-esteem and feelings of competence. Although numerous unproven treatments for ADHD have been advocated and marketed making them controversial, none of these treatments at this time including dietary manipulation, mega-vitamin therapy, hypnosis, EEG biofeedback, sensory integration training, cognitive training or computerized activities have been scientifically and consistently demonstrated to benefit children with ADHD on a long term basis. Some of these interventions are worthy of continued research, others are not. From the available research it is not likely that any of these treatments will demonstrate the ability to help ADHD children more effectively than the scientifically proven and presently utilized treatments.

It has been suggested that by adulthood at least one-third of ADHD children have outgrown the core problems and do not experience serious difficulty. Approximately one-third continue to be bothered by some if not all of their ADHD symptoms. The remaining one-quarter to one-third continue to present core symptoms and may have significant difficulty with vocational activities, marital relations, anti-social activities, or habit disorders. Unfortunately, there is no precise way to predict which children will outgrow ADHD. Higher family socioeconomic status, social contact, higher intellect, and a family history relatively free of serious psychiatric problems are all positive indicators for the ADHD child and adolescent. It also appears that an ADHD child or adolescent with serious conduct and aggression problems stands a greater chance of continuing to have these problems into adulthood.

Research also suggests that ADHD children participating in a long-term supportive treatment program involving multiple treatment interventions, have better self-esteem, less adolescent delinquency, and clearly a better potential future into adulthood. It has also been well documented that the type of relationship the child with ADHD develops with care givers is critical in determining their adult outcome.

Above all else, the ADHD child needs compassionate understanding. Parents and teachers should not pity, tease, attack, be frightened, angered by, or overindulge this child. They must understand that the condition is real; it involves critical skill deficits; it is primarily a disorder of incompetence, they did not cause the condition; and much can be done to help the ADHD child and adolescent at home, at school, and in the community.

RESOURCES FOR PARENTS

Videos

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The Neurology, Learning & Behavior Center provides multidisciplinary evaluation and treatment programs for children and adults with Attention-deficit Hyperactivity Disorders, specific learning disabilities, neurological disease, head trauma and adjustment difficulties.

For more information, or to order an additional copy of this Guide or other NLBC publications, write or call:

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